

=> fil reg

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TSCA INFORMATION NOW CURRENT THROUGH December 2, 2006

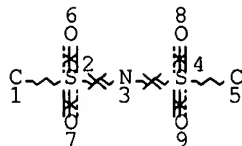
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REGISTRY includes numerically searchable data for experimental and
 predicted properties as well as tags indicating availability of
 experimental property data in the original document. For information
 on property searching in REGISTRY, refer to:

<http://www.cas.org/support/stngen/stndoc/properties.html>

=> d l7 que stat

L3 STR



NODE ATTRIBUTES:

NSPEC IS RC AT 1
 NSPEC IS RC AT 5
 DEFAULT MLEVEL IS ATOM
 DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED
 NUMBER OF NODES IS 9

STEREO ATTRIBUTES: NONE

L7 9097 SEA FILE=REGISTRY SSS FUL L3

100.0% PROCESSED 12559 ITERATIONS
 SEARCH TIME: 00.00.01

9097 ANSWERS

=> d his nofile

(FILE 'HOME' ENTERED AT 16:52:52 ON 14 MAY 2007)

FILE 'HCAPLUS' ENTERED AT 16:52:59 ON 14 MAY 2007

L1 1 SEA ABB=ON PLU=ON US2005100795/PN

FILE 'REGISTRY' ENTERED AT 16:53:26 ON 14 MAY 2007
L2 15 SEA ABB=ON PLU=ON (105-58-8/BI OR 108-32-7/BI OR

FILE 'LREGISTRY' ENTERED AT 17:22:45 ON 14 MAY 2007
L3 STR
L4 STR

FILE 'REGISTRY' ENTERED AT 17:25:44 ON 14 MAY 2007
L5 13 SEA SSS SAM L3 AND L4
L6 50 SEA SSS SAM L3
L7 9097 SEA SSS FUL L3
SAV L7 WEI013/A
L8 5 SEA ABB=ON PLU=ON L2 AND L7
L9 303 SEA ABB=ON PLU=ON L7 AND (T1 OR T2 OR T3 OR B2)/PG
L10 110 SEA ABB=ON PLU=ON L7 AND LNTH/PG

FILE 'HCAPLUS' ENTERED AT 17:32:13 ON 14 MAY 2007
L11 QUE ABB=ON PLU=ON ELECTROLY?
L12 12 SEA ABB=ON PLU=ON L9(L)L11
L13 5 SEA ABB=ON PLU=ON L10(L)L11
L14 16 SEA ABB=ON PLU=ON L12 OR L13
L15 QUE ABB=ON PLU=ON IMIDE#(2A)ANION
L16 QUE ABB=ON PLU=ON (TRANSITION? OR LANTHANID? OR
LANTHANOID? OR LANTHANON? OR LNTH) (2A)METAL?
L17 QUE ABB=ON PLU=ON SULFONA? OR SULPHONA? OR SULFONY? OR
SULPHONY? OR SOLPHONIC?
L18 9 SEA ABB=ON PLU=ON L15 AND L16
L19 44 SEA ABB=ON PLU=ON L15 AND L17
L20 1 SEA ABB=ON PLU=ON L18 AND L19
L21 16 SEA ABB=ON PLU=ON L14 OR L20

=> fil hcap

FILE 'HCAPLUS' ENTERED AT 17:41:19 ON 14 MAY 2007
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FILE COVERS 1907 - 14 May 2007 VOL ISS ISS
FILE LAST UPDATED: 13 May 2007 (20070513/ED)
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FILE COVERS 1907 - 14 May 2007 VOL 146 ISS 21
FILE LAST UPDATED: 1 May 2007 (20070501/ED)

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This file contains CAS Registry Numbers for easy and accurate

=> d l21 ibib abs hitstr hitind 1-16

L21 ANSWER 1 OF 16 HCAPLUS COPYRIGHT 2007 ACS on STN
 ACCESSION NUMBER: 2006:1338486 HCAPLUS Full-text
 DOCUMENT NUMBER: 146:89965
 TITLE: Environmentally safe beryllium-free
 electrochromic mirrors
 INVENTOR(S): Agrawal, Anoop; Cronin, John P.; Tonazzi, Juan
 Carlos Lopez
 PATENT ASSIGNEE(S): Electrochromix, Inc., USA
 SOURCE: U.S. Pat. Appl. Publ., 15pp.
 CODEN: USXXCO
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2006285190	A1	20061221	US 2006-454055	20060615

PRIORITY APPLN. INFO.:

US 2005-692025P

P

20050617

AB This invention recognizes the hazards of beryllium and beryllium oxide in automotive applications and offers alternative material solns. for beryllium-free electrochromic mirrors. Further, this can be combined by reducing other known hazards such as mercury, cadmium, lead and antimony compds.

IT 811800-51-8

RL: PRP (Properties); TEM (Technical or engineered material use);
 USES (Uses)

(Fc-Vio imide, solid **electrolyte** containing;
 environmentally safe beryllium-free electrochromic mirrors)

RN 811800-51-8 HCAPLUS

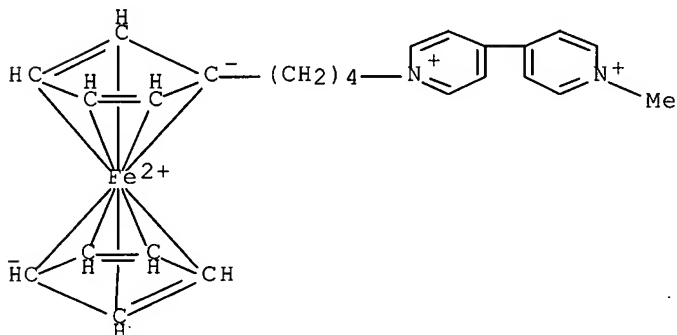
CN 4,4'-Bipyridinium, 1-(4-ferrocenylbutyl)-1'-methyl-, salt with
 1,1,1-trifluoro-N-[(trifluoromethyl)sulfonyl]methanesulfonamide
 (1:2) (9CI) (CA INDEX NAME)

CM 1

CRN 289497-85-4

CMF C25 H28 Fe N2

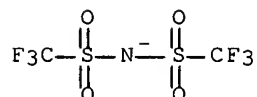
CCI CCS



CM 2

CRN 98837-98-0

CMF C2 F6 N O4 S2



INCL 359265000

CC 73-11 (Optical, Electron, and Mass Spectroscopy and Other Related Properties)

Section cross-reference(s): 38, 76

IT 811800-51-8

RL: PRP (Properties); TEM (Technical or engineered material use);
USES (Uses)(Fc-Vio imide, solid **electrolyte** containing;
environmentally safe beryllium-free electrochromic mirrors)

L21 ANSWER 2 OF 16 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2006:361613 HCAPLUS Full-text

DOCUMENT NUMBER: 146:185387

TITLE: Conductivities of electrolytes based on
PEI-b-PEO-b-PEI triblock copolymers with lithium
and copper TFSI saltsAUTHOR(S): Ionescu-Vasii, Luminita L.; Garcia, Beatrice;
Armand, MichelCORPORATE SOURCE: Laboratoire International sur les Materiaux
Electro-Actifs, CNRS UMR 2289, Fr.SOURCE: Solid State Ionics (2006), 177(9-10), 885-892
CODEN: SSIOD3; ISSN: 0167-2738

PUBLISHER: Elsevier B.V.

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Tri block-copolymer poly(iminoethylene)-b-poly(oxyethylene)-b- poly(iminoethylene) with a poly(oxyethylene) central block (PEI-b-PEO-b-PEI) were used as a "dual" matrix for polymer electrolytes having selectivity for hard cations (Li+/PEO) in one phase and for soft cations (Cu2+/PEI) in the other. Conductivity measurements were recorded for 20:1, 12:1 and 8:1 coordinating atom (O or/and N) to cation (Li+, Cu2+) ratios, for each of the three complexes studied: PEI-b-PEO-LiTFSI-b-PEI, PEI-Cu(TFSI)2-b-PEO-b-PEI- Cu(TFSI)2 and PEI-Cu(TFSI)2-b-PEO-LiTFSI-b-PEI-Cu(TFSI)2. For either low (20°C) or high temperature (80°C) the highest conductivity was given by the polymer electrolyte based on Cu(TFSI)2 with N/Cu2+ = 20:1 (10⁻⁶, resp. 2 + 10⁻⁴ S cm⁻¹). In the present paper, the conductivity evolution is discussed in relation with the polymer structure, the type and the concentration of the salt and the thermal behavior of our systems.

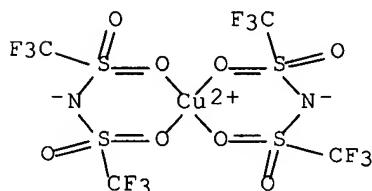
IT 162715-14-2

RL: RCT (Reactant); RACT (Reactant or reagent)
(conductivities of poly(iminoethylene)-poly(oxyethylene) triblock
copolymer **electrolytes** with lithium and copper TFSI
salts)

RN 162715-14-2 HCAPLUS

CN Copper, bis[1,1,1-trifluoro-N-[(trifluoromethyl)sulfonyl-

[O-]methanesulfonamido-kO]- (CA INDEX NAME)



CC 38-3 (Plastics Fabrication and Uses)

IT 90076-65-6, Lithium bis(perfluoromethylsulfonyl)imide
162715-14-2

RL: RCT (Reactant); RACT (Reactant or reagent)
(conductivities of poly(iminoethylene)-poly(oxyethylene) triblock
copolymer **electrolytes** with lithium and copper TFSI
salts)

REFERENCE COUNT: 31 THERE ARE 31 CITED REFERENCES AVAILABLE
FOR THIS RECORD. ALL CITATIONS AVAILABLE
IN THE RE FORMAT

L21 ANSWER 3 OF 16 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2006:90740 HCAPLUS Full-text

DOCUMENT NUMBER: 144:342577

TITLE: A New Strategy for Synthesis of Novel Classes of
Room-Temperature Ionic Liquids Based on
Complexation Reaction of Cations

AUTHOR(S): Huang, Jing-Fang; Luo, Huimin; Dai, Sheng

CORPORATE SOURCE: Chemical Sciences Division, Oak Ridge National
Laboratory, Oak Ridge, TN, 37831, USA

SOURCE: Journal of the Electrochemical Society (2006),
153(2), J9-J13
CODEN: JESOAN; ISSN: 0013-4651

PUBLISHER: Electrochemical Society

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Ionic liqs. were synthesized with a new methodol. The essence of this methodol.
is to form the cations of ionic liqs. through the complexation reactions of
neutral organic ligands with metal ions, followed by the subsequent metathesis
reactions of the resulting salts with anion donors. The authors chose N-
lithiotrifluoromethanesulfonimide (Li+ Tf2N-) as a candidate for anion donors
because Tf2N- anions have high thermal stabilities and weakly coordinating
properties, which are crucial to the generation of less viscous and more
hydrophobic ionic liqs. The transition-metal ions chosen were Ag+ and Zn2+. The
uses of these ionic liqs. as new electrolytes for electrodeposition were
demonstrated.

IT 858101-35-6P 858101-36-7P 858101-37-8P

858101-39-0P 858101-41-4P 858101-43-6P

858101-45-8P 858101-47-0P 880261-01-8P

880261-03-0P 880261-06-3P

RL: CPS (Chemical process); PEP (Physical, engineering or chemical
process); PRP (Properties); RCT (Reactant); SPN (Synthetic
preparation); PREP (Preparation); PROC (Process); RACT (Reactant or
reagent)

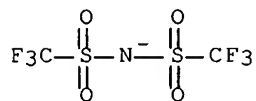
(preparation and electrochem. properties of silver and zinc amine
trifluoromethanesulfonimide room-temperature ionic liqs. and use as
electrolytes for metal electrodeposition)

RN 858101-35-6 HCAPLUS
 CN Silver(1+), bis(1-propanamine)-, salt with 1,1,1-trifluoro-N-
 [(trifluoromethyl)sulfonyl]methanesulfonamide (1:1) (9CI) (CA INDEX
 NAME)

CM 1

CRN 98837-98-0

CMF C2 F6 N O4 S2

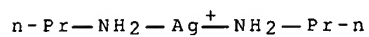


CM 2

CRN 15907-07-0

CMF C6 H18 Ag N2

CCI CCS

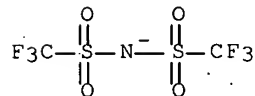


RN 858101-36-7 HCAPLUS
 CN Silver(1+), bis(ethanamine)-, salt with 1,1,1-trifluoro-N-
 [(trifluoromethyl)sulfonyl]methanesulfonamide (1:1) (9CI) (CA INDEX
 NAME)

CM 1

CRN 98837-98-0

CMF C2 F6 N O4 S2

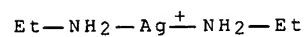


CM 2

CRN 18080-03-0

CMF C4 H14 Ag N2

CCI CCS

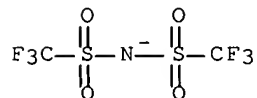


RN 858101-37-8 HCAPLUS
 CN Silver(1+), bis(methanamine)-, salt with 1,1,1-trifluoro-N-
 [(trifluoromethyl)sulfonyl]methanesulfonamide (1:1) (9CI) (CA INDEX
 NAME)

CM 1

CRN 98837-98-0

CMF C2 F6 N O4 S2

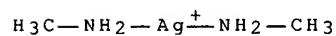


CM 2

CRN 16972-62-6

CMF C2 H10 Ag N2

CCI CCS



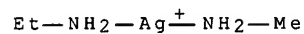
RN 858101-39-0 HCAPLUS
 CN Silver(1+), (ethanamine)(methanamine)-, salt with
 1,1,1-trifluoro-N-[(trifluoromethyl)sulfonyl]methanesulfonamide
 (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 858101-38-9

CMF C3 H12 Ag N2

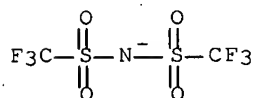
CCI CCS



CM 2

CRN 98837-98-0

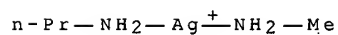
CMF C2 F6 N O4 S2



RN 858101-41-4 HCAPLUS
CN Silver(1+), (methanamine)(1-propanamine)-, salt with
1,1,1-trifluoro-N-[(trifluoromethyl)sulfonyl]methanesulfonamide
(1:1) (9CI) (CA INDEX NAME)

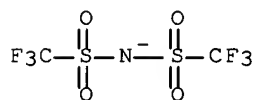
CM 1

CRN 858101-40-3
CMF C4 H14 Ag N2
CCI CCS



CM 2

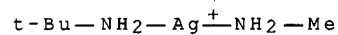
CRN 98837-98-0
CMF C2 F6 N O4 S2



RN 858101-43-6 HCAPLUS
CN Silver(1+), (methanamine)(2-methyl-2-propanamine)-, salt with
1,1,1-trifluoro-N-[(trifluoromethyl)sulfonyl]methanesulfonamide
(1:1) (9CI) (CA INDEX NAME)

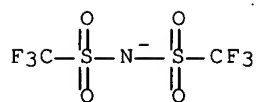
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CRN 858101-42-5
CMF C5 H16 Ag N2
CCI CCS



CM 2

CRN 98837-98-0
CMF C2 F6 N O4 S2



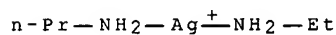
RN 858101-45-8 HCAPLUS
 CN Silver(1+), (ethanamine)(1-propanamine)-, salt with
 1,1,1-trifluoro-N-[(trifluoromethyl)sulfonyl]methanesulfonamide
 (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 858101-44-7

CMF C5 H16 Ag N2

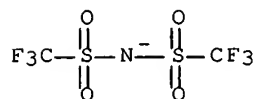
CCI CCS



CM 2

CRN 98837-98-0

CMF C2 F6 N O4 S2



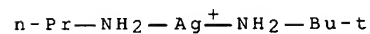
RN 858101-47-0 HCAPLUS
 CN Silver(1+), (2-methyl-2-propanamine)(1-propanamine)-, salt with
 1,1,1-trifluoro-N-[(trifluoromethyl)sulfonyl]methanesulfonamide
 (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 858101-46-9

CMF C7 H20 Ag N2

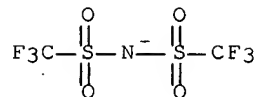
CCI CCS



CM 2

CRN 98837-98-0

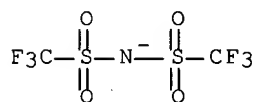
CMF C2 F6 N O4 S2



RN 880261-01-8 HCAPLUS
 CN Silver(1+), bis(2-methyl-2-propanamine)-, salt with
 1,1,1-trifluoro-N-[(trifluoromethyl)sulfonyl]methanesulfonamide
 (1:1) (9CI) (CA INDEX NAME)

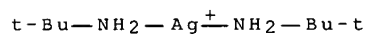
CM 1

CRN 98837-98-0
 CMF C2 F6 N O4 S2



CM 2

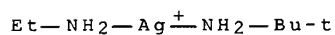
CRN 15905-74-5
 CMF C8 H22 Ag N2
 CCI CCS



RN 880261-03-0 HCAPLUS
 CN Silver(1+), (ethanamine)(2-methyl-2-propanamine)-, salt with
 1,1,1-trifluoro-N-[(trifluoromethyl)sulfonyl]methanesulfonamide
 (1:1) (9CI) (CA INDEX NAME)

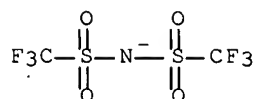
CM 1

CRN 880261-02-9
 CMF C6 H18 Ag N2
 CCI CCS



CM 2

CRN 98837-98-0
 CMF C2 F6 N O4 S2



RN 880261-06-3 HCAPLUS

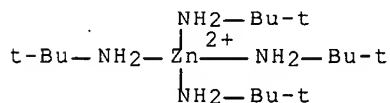
CN Zinc(2+), tetrakis(2-methyl-2-propanamine-κN)-, (T-4)-, salt
with 1,1,1-trifluoro-N-[(trifluoromethyl)sulfonyl]methanesulfonamide
(1:2) (9CI) (CA INDEX NAME)

CM 1

CRN 880261-05-2

CMF C16 H44 N4 Zn

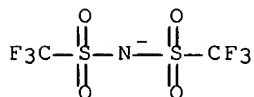
CCI CCS



CM 2

CRN 98837-98-0

CMF C2 F6 N O4 S2



CC 78-7 (Inorganic Chemicals and Reactions)

Section cross-reference(s): 72

IT 858101-35-6P 858101-36-7P 858101-37-8P

858101-39-0P 858101-41-4P 858101-43-6P

858101-45-8P 858101-47-0P 880261-01-8P

880261-03-0P 880261-06-3P

RL: CPS (Chemical process); PEP (Physical, engineering or chemical process); PRP (Properties); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); PROC (Process); RACT (Reactant or reagent)

(preparation and electrochem. properties of silver and zinc amine trifluoromethanesulfonimide room-temperature ionic liqs. and use as **electrolytes** for metal electrodeposition)

REFERENCE COUNT:

37

THERE ARE 37 CITED REFERENCES AVAILABLE
FOR THIS RECORD. ALL CITATIONS AVAILABLE
IN THE RE FORMAT

L21 ANSWER 4 OF 16 HCAPLUS COPYRIGHT 2007 ACS on STN
 ACCESSION NUMBER: 2005:1226939 HCAPLUS Full-text
 DOCUMENT NUMBER: 145:170491
 TITLE: Novel zinc ion conducting polymer gel electrolytes based on ionic liquids
 AUTHOR(S): Xu, Jun John; Ye, Hui; Huang, Jian
 CORPORATE SOURCE: Department of Materials Science and Engineering, Rutgers, the State University of New Jersey, Piscataway, NJ, 08854, USA
 SOURCE: Electrochemistry Communications (2005), 7(12), 1309-1317
 CODEN: ECCMF9; ISSN: 1388-2481
 PUBLISHER: Elsevier B.V.
 DOCUMENT TYPE: Journal
 LANGUAGE: English

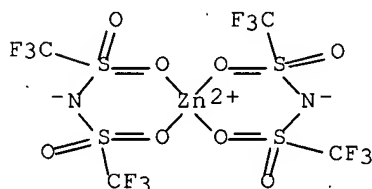
AB The authors report novel zinc ion conducting polymer gel electrolytes (PGEs) based on nonvolatile room temperature ionic liqs. The PGEs consist of an ionic liquid, with a zinc salt dissolved in it, blended with a polymer matrix, poly(vinylidene fluoride-co- hexafluoropropylene) (PVDF-HFP). The resultant electrolyte membranes are freestanding, translucent, flexible and elastic, with excellent mech. integrity and strength. They possess exceptional thermal stability, exhibit essentially no weight loss under dynamic vacuum or upon heating to 200 °C, and remain the same gel phase in wide temperature ranges, with ionic conductivities .apprx.10⁻³ S/cm at room temperature, 10⁻⁴ S/cm at -20° and 4-5 + 10⁻³ S/cm at 80°. Electrochem. tests show that zinc ions are mobile in the membranes and zinc metal is capable of dissoln. into and deposition from the membranes. The membranes also exhibit wide electrochem. stability windows. The results of this study demonstrate the promise of developing PGEs based on ionic liqs. for potential application in next-generation nonaq. zinc battery systems.

IT 168106-25-0P

RL: DEV (Device component use); PRP (Properties); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)
 (novel zinc ion conducting polymer gel **electrolytes** based on ionic liqs.)

RN 168106-25-0 HCAPLUS

CN Zinc, bis[1,1,1-trifluoro-N-[(trifluoromethyl)sulfonyl-kO]methanesulfonamido-kO]-, (T-4)- (9CI) (CA INDEX NAME)



CC 52-2 (Electrochemical, Radiational, and Thermal Energy Technology)
 Section cross-reference(s): 72, 76

IT 168106-25-0P

RL: DEV (Device component use); PRP (Properties); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)
 (novel zinc ion conducting polymer gel **electrolytes** based on ionic liqs.)

REFERENCE COUNT: 38 THERE ARE 38 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L21 ANSWER 5 OF 16 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2005:1127462 HCAPLUS Full-text

DOCUMENT NUMBER: 144:469127

TITLE: Synthesis and characterization of new block copolymer electrolytes with solvating affinities for different cations

AUTHOR(S): Ionescu-Vasii, Luminita L.; Abu-Lebdeh, Yaser; Armand, Michel

CORPORATE SOURCE: Laboratoire International sur les Materiaux Electro-Actifs UMR 2289 CNRS, Universite de Montreal, Montreal, QC, H3C 3J7, Can.

SOURCE: Solid State Ionics (2005), 176(37-38), 2769-2775

CODEN: SSIOD3; ISSN: 0167-2738

PUBLISHER: Elsevier B.V.

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Poly(iminoethylene)-b-poly(oxyethylene)-b-poly(iminoethylene) (PEI-b-PEO-b-PEI) polymers were synthesized and used as a "dual" matrix for polymer electrolytes having selectivity for "hard" cations (Li⁺/PEO) in one phase and for "soft" cations (Cu²⁺/PEI) in the other. Both blocks are phase-separated, but each segment tends to crystallize, influenced by water and salt. The synthesis and characterization, including AFM imaging before and after the perfluorosulfonimide salts loading is being addressed. The new block copolymer electrolytes with solvating affinities for different cations could be used either as a reference electrode or in the fabrication of electrochromic devices.

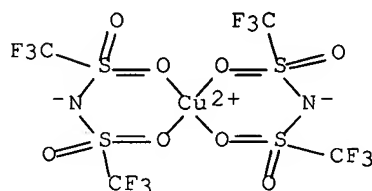
IT 162715-14-2

RL: PRP (Properties)

(poly(iminoethylene)-poly(oxyethylene) triblock copolymer complexes; synthesis and characterization of poly(iminoethylene)-poly(oxyethylene) block copolymer **electrolytes** with solvating affinities for different cations)

RN 162715-14-2 HCAPLUS

CN Copper, bis[1,1,1-trifluoro-N-[(trifluoromethyl)sulfonyl-kO]methanesulfonamidato-kO]- (CA INDEX NAME)



CC 38-3 (Plastics Fabrication and Uses)

Section cross-reference(s): 37

IT 90076-65-6 162715-14-2

RL: PRP (Properties)

(poly(iminoethylene)-poly(oxyethylene) triblock copolymer complexes; synthesis and characterization of poly(iminoethylene)-poly(oxyethylene) block copolymer **electrolytes** with solvating affinities for different cations)

REFERENCE COUNT: 35 THERE ARE 35 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L21 ANSWER 6 OF 16 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2005:248866 HCAPLUS Full-text
 DOCUMENT NUMBER: 143:10502
 TITLE: Plastic crystal electrolytes based on a polar,
 neutral matrix
 INVENTOR(S): Abu-Lebdeh, Yaser; Armand, Michel; Alarco,
 Pierre-Jean
 PATENT ASSIGNEE(S): Can.
 SOURCE: Can. Pat. Appl., 27 pp.
 CODEN: CPXXEB
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO. -----	KIND ----	DATE -----	APPLICATION NO. -----	DATE
CA 2435218	A1	20050128	CA 2003-2435218	200307 28

PRIORITY APPLN. INFO.: CA 2003-2435218
 200307
 28

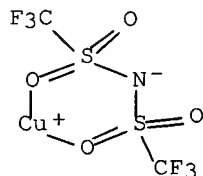
AB In the present invention, neutral organic or inorg. mols. with a high dipole moment are used as a solid matrix for inorg. salts in order to give high ionic conductivity of "ions-of -interest". The plastic crystalline phase of the solid matrixes covers a wide range of temps., which allows for the design of ionic conductors working at the required operating temperature of the devices.

IT 291300-50-0

RL: DEV (Device component use); USES (Uses)
 (plastic crystal **electrolytes** based on a polar, neutral
 matrix for secondary lithium batteries or photoelectrochem cells)

RN 291300-50-0 HCAPLUS

CN Copper, [1,1,1-trifluoro-N-[(trifluoromethyl)sulfonyl-
 KO]methanesulfonamidato-KO]- (9CI) (CA INDEX NAME)



IC ICM H01B001-06

ICS C08K003-00

CC 52-2 (Electrochemical, Radiational, and Thermal Energy Technology)
 Section cross-reference(s): 65, 72, 76

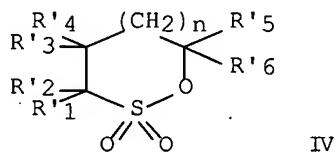
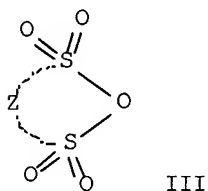
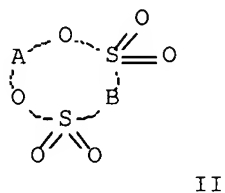
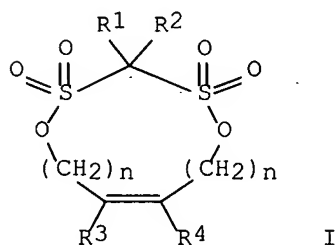
IT 102-71-6, Triethanolamine, uses 110-61-2, Succinonitrile
 630-18-2, Pivalonitrile 2923-28-6, Silver trifluoromethane
 sulfonate 2926-27-4 3695-98-5, 1,1,3,3-Tetracyanopropane
 5314-55-6, Ethyl trimethoxy silane 14283-07-9, Lithium
 tetrafluoroborate 14984-76-0 25322-68-3, Polyethylene oxide
 33454-82-9, Lithium trifluoromethane sulfonate 34723-47-2
 39302-37-9, Lithium titanium oxide 42152-44-3, Copper
 trifluoromethane sulfonate 52627-24-4, Cobalt lithium oxide

90076-65-6 90076-67-8 165324-08-3 165324-09-4 168106-22-7
195199-57-6 291300-50-0

RL: DEV (Device component use); USES (Uses)
(plastic crystal **electrolytes** based on a polar, neutral
matrix for secondary lithium batteries or photoelectrochem cells)

L21 ANSWER 7 OF 16 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2004:823614 HCAPLUS Full-text
DOCUMENT NUMBER: 141:334876
TITLE: Electrolyte solution for secondary battery and
the battery
INVENTOR(S): Kusachi, Yuki; Utsuki, Koji
PATENT ASSIGNEE(S): NEC Corp., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 27 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2004281325	A	20041007	JP 2003-74054	20030318
PRIORITY APPLN. INFO.:			JP 2003-74054	20030318
OTHER SOURCE(S):		MARPAT 141:334876		
GI				



AB The electrolyte solution contains an aprotic solvent and an unsatd. cyclic disulfonate ester I, where R1-R4 = H, Me, Et, or halogen and n = integer 0-2. The electrolyte solution may also contain II [A = (substituted) C1-5 (fluoro)alkylene,

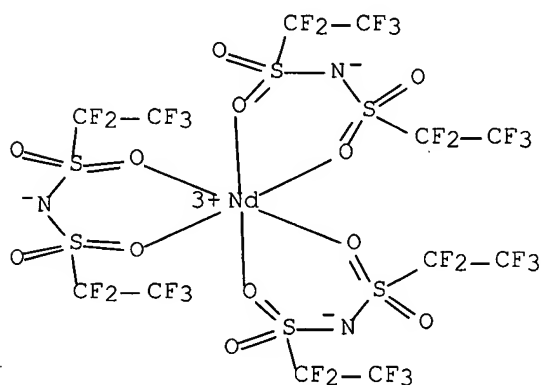
carbonyl, sulfinyl, or bivalent C2-6 group containing ether bond connected (fluoro)alkylene units; B = (substituted) alkylene group], III [Z = (substituted) C2-4 alkylene, alkenylene, aromatic or heterocyclic group], or IV (n = integer 0-2, R'1-R'6 = H C1-12 alkyl, C3-6 cycloalkyl, or C6-12 aryl group). The battery is a secondary Li battery.

IT 259194-36-0 259194-40-6 634598-36-0
634598-37-1

RL: MOA (Modifier or additive use); USES (Uses)
(electrolyte solns. containing cyclic disulfonate esters
and other additives for secondary lithium batteries)

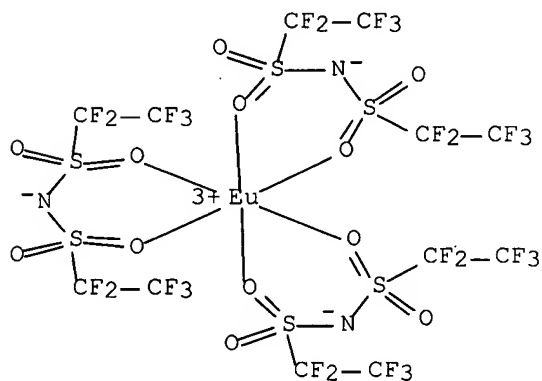
RN 259194-36-0 HCAPLUS

CN Neodymium, tris[1,1,2,2,2-pentafluoro-N-[(pentafluoroethyl)sulfonyl- κ O]ethanesulfonamidato- κ O]-, (OC-6-11)- (9CI) (CA INDEX
NAME)



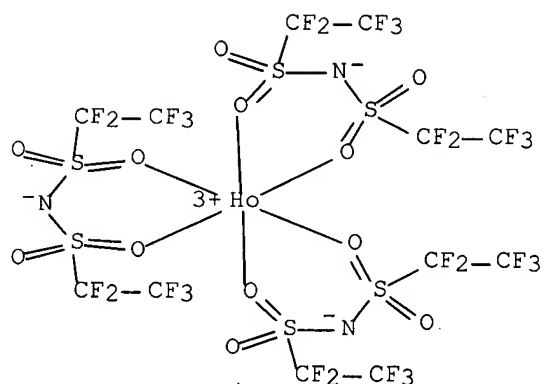
RN 259194-40-6 HCAPLUS

CN Europium, tris[1,1,2,2,2-pentafluoro-N-[(pentafluoroethyl)sulfonyl- κ O]ethanesulfonamidato- κ O]-, (OC-6-11)- (9CI) (CA INDEX
NAME)



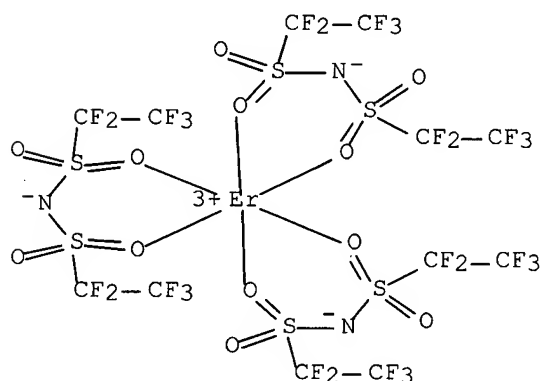
RN 634598-36-0 HCAPLUS

CN Holmium, tris[1,1,2,2,2-pentafluoro-N-[(pentafluoroethyl)sulfonyl- κ O]ethanesulfonamidato- κ O]-, (OC-6-11)- (9CI) (CA INDEX
NAME)



RN 634598-37-1 HCAPLUS

CN Erbium, tris[1,1,2,2,2-pentafluoro-N-[(pentafluoroethyl)sulfonyl-kO]ethanesulfonamidato-kO]-, (OC-6-11)- (9CI) (CA INDEX NAME)



IC ICM H01M010-40

ICS H01M004-58

CC 52-2 (Electrochemical, Radiational, and Thermal Energy Technology)

IT 872-36-6, Vinylene carbonate 1120-71-4, 1,3-Propanesultone 14913-52-1, Neodymium ion (Nd³⁺), uses 18472-30-5, Erbium ion (Er³⁺), uses 22541-18-0, Europium ion (Eu³⁺), uses 22541-22-6, Holmium ion (Ho³⁺), uses 259194-36-0 259194-40-6 634598-36-0 634598-37-1

RL: MOA (Modifier or additive use); USES (Uses)

(electrolyte solns. containing cyclic disulfonate esters and other additives for secondary lithium batteries)

L21 ANSWER 8 OF 16 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2004:181920 HCAPLUS Full-text

DOCUMENT NUMBER: 140:184814

TITLE: Electrolyte solution for secondary battery

INVENTOR(S): Utsugi, Koji; Kusachi, Yuki; Yamazaki, Ikiko

PATENT ASSIGNEE(S): NEC Corporation, Japan

SOURCE: Eur. Pat. Appl., 35 pp.

CODEN: EPXXDW

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 1394888	A1	20040303	EP 2003-90268	20030822
EP 1394888	B1	20060412		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
JP 2004281368	A	20041007	JP 2003-289432	20030807
US 2004043300	A1	20040304	US 2003-647541	20030826
US 7163768	B2	20070116		
KR 2004019994	A	20040306	KR 2003-59849	20030828
CN 1495959	A	20040512	CN 2003-132755	20030829
PRIORITY APPLN. INFO.:				
			JP 2002-250441	A 20020829
			JP 2003-52588	A 20030228
			JP 2003-289432	A 20030807

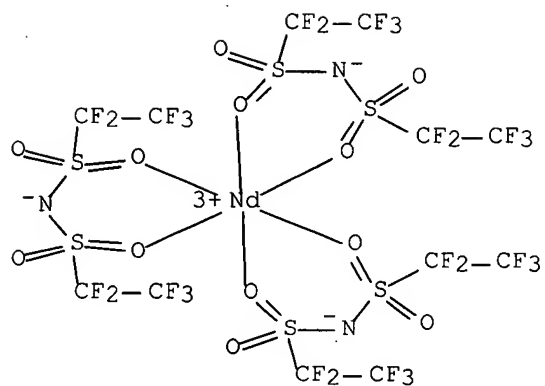
AB The present invention provides a technol. of inhibiting the decomposition of the solvent of the electrolyte solution for a secondary battery. Further, the present invention provides a technol. of prohibiting the resistance increase of a secondary battery and improving the storage properties such as improving the capacity retention ratio. An electrolyte solution comprising non-proton solvent and cyclic sulfonic ester including at least two sulfonyl groups may be used.

IT 259194-36-0 259194-40-6 634598-36-0
634598-37-1

RL: MOA (Modifier or additive use); USES (Uses)
(**electrolyte** solution for secondary battery)

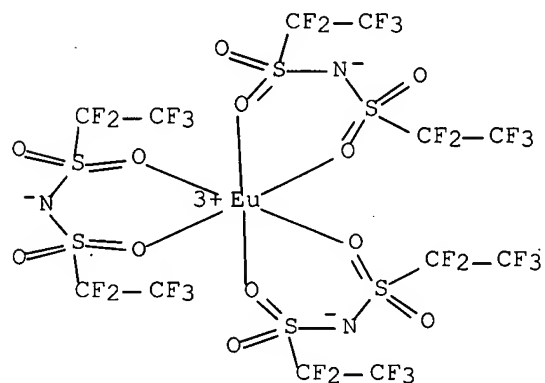
RN 259194-36-0 HCAPLUS

CN Neodymium, tris[1,1,2,2,2-pentafluoro-N-[(pentafluoroethyl)sulfonyl-kO]ethanesulfonamidato-kO]-, (OC-6-11)-(9CI) (CA INDEX NAME)



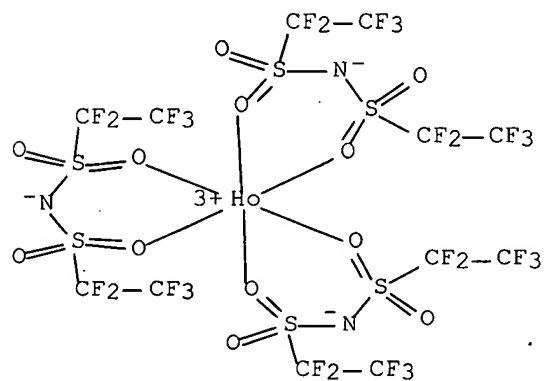
RN 259194-40-6 HCAPLUS

CN Europium, tris[1,1,2,2,2-pentafluoro-N-[(pentafluoroethyl)sulfonyl-kappa O]ethanesulfonamidato-kappa O]-, (OC-6-11)- (9CI) (CA INDEX NAME)

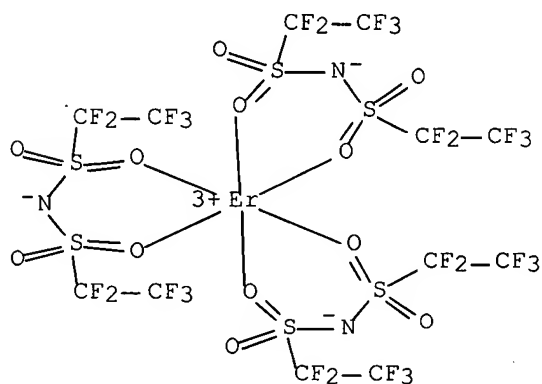


RN 634598-36-0 HCAPLUS

CN Holmium, tris[1,1,2,2,2-pentafluoro-N-[(pentafluoroethyl)sulfonyl-kappa O]ethanesulfonamidato-kappa O]-, (OC-6-11)- (9CI) (CA INDEX NAME)



RN 634598-37-1 HCAPLUS
 CN Erbium, tris[1,1,2,2,2-pentafluoro-N-[(pentafluoroethyl)sulfonyl-
 κO]ethanesulfonamido-κO]-, (OC-6-11)- (9CI) (CA INDEX
 NAME).



IC ICM H01M010-40
 ICS H01M006-16
 CC 52-2 (Electrochemical, Radiational, and Thermal Energy Technology)
 IT 1120-71-4, 1,3-Propanesultone 14913-52-1, Neodymium(3+), uses
 18472-30-5, Erbium(3+), uses 22541-18-0, Europium(3+), uses
 22541-22-6, Holmium(3+), uses 37181-39-8, Triflate 99591-73-8
 99591-74-9 99591-80-7 259194-36-0 259194-40-6
 634598-36-0 634598-37-1 659737-87-8
 659737-88-9 659737-89-0 659737-90-3
 RL: MOA (Modifier or additive use); USES (Uses)
 (electrolyte solution for secondary battery)
 REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR
 THIS RECORD. ALL CITATIONS AVAILABLE IN
 THE RE FORMAT

L21 ANSWER 9 OF 16 HCAPLUS COPYRIGHT 2007 ACS on STN
 ACCESSION NUMBER: 2004:117748 HCAPLUS Full-text
 DOCUMENT NUMBER: 140:166747
 TITLE: Room-temperature-molten ammonium salts showing
 high ion conductivity and good air stability as
 electrolytes for electrochemical devices
 INVENTOR(S): Matsumoto, Hajime
 PATENT ASSIGNEE(S): National Institute of Advanced Industrial
 Science and Technology, Japan
 SOURCE: Jpn. Kokai Tokkyo Koho, 11 pp.
 CODEN: JKXXAF
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2004043334	A	20040212	JP 2002-200668	20020709

PRIORITY APPLN. INFO.: JP 2002-200668

200207
09

OTHER SOURCE(S): MARPAT 140:166747

AB The salts are $[RNR_1R_2R_2]+X^-$ [R = redox organic group; R_1 - R_3 = (halo)alkyl, alkoxy, aryl, aralkyl, alkoxyalkyl; R_1 and R_2 may form 5-8-membered rings with N; X^- = halides, BF_4^- , PF_6^- , etc.]. The electrochem. devices containing the salts and ferrocenium salts are preferably solar cells and electrochromic devices.

IT 655247-50-0P

RL: DEV (Device component use); IMF (Industrial manufacture); PREP (Preparation); USES (Uses)

(room-temperature-molten ammonium salts showing high ion conductivity and good air stability as **electrolytes** for solar cells and electrochromic devices)

RN 655247-50-0 HCAPLUS

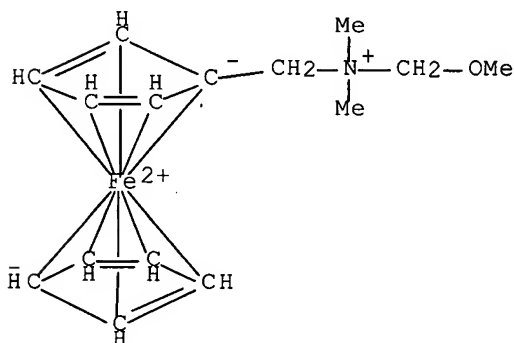
CN Methanaminium, 1-ferrocenyl-N-(methoxymethyl)-N,N-dimethyl-, salt with 1,1,1-trifluoro-N-[(trifluoromethyl)sulfonyl]methanesulfonamide (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 655247-49-7

CMF C15 H22 Fe N O

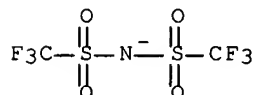
CCI CCS



CM 2

CRN 98837-98-0

CMF C2 F6 N O4 S2



IC ICM C07F017-02

ICS H01L031-04; H01M014-00

CC 52-2 (Electrochemical, Radiational, and Thermal Energy Technology)
Section cross-reference(s): 29, 73

IT 655247-50-0P

RL: DEV (Device component use); IMF (Industrial manufacture); PREP (Preparation); USES (Uses)

(room-temperature-molten ammonium salts showing high ion conductivity and good air stability as **electrolytes** for solar cells and electrochromic devices)

L21 ANSWER 10 OF 16 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2004:57903 HCAPLUS Full-text

DOCUMENT NUMBER: 140:131080

TITLE: Electrolyte solution for the secondary battery and the battery using the solution

INVENTOR(S): Utsuki, Koji; Mori, Mitsuhiro

PATENT ASSIGNEE(S): NEC Corp., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 24 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

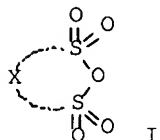
FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO. -----	KIND ---	DATE -----	APPLICATION NO. -----	DATE
JP 2004022336	A	20040122	JP 2002-175648	200206 17
			JP 2002-175648	200206 17

PRIORITY APPLN. INFO.:

GI



AB The electrolyte solution has a sulfonic acid anhydride I [X = (substituted) C2-4 alkylene, (substituted) C2-4 alkenyl, or (substituted) aromatic ring] in an aprotic solvent. The battery has a cathode, an anode, and the above electrolyte solution

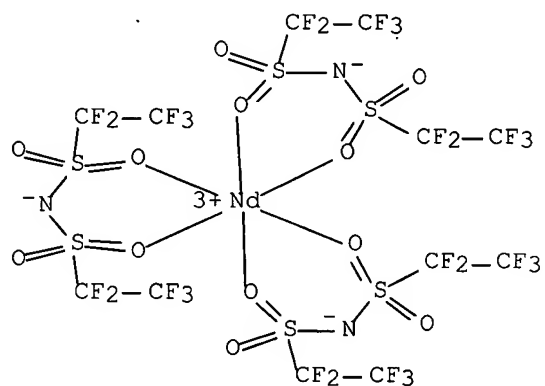
IT 259194-36-0 259194-40-6 634598-36-0
634598-37-1

RL: MOA (Modifier or additive use); USES (Uses)

(**electrolyte** solns. containing sulfonic acid anhydrides for secondary batteries)

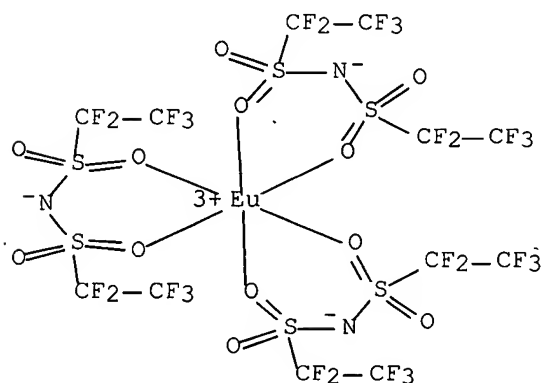
RN 259194-36-0 HCAPLUS

CN Neodymium, tris[1,1,2,2,2-pentafluoro-N-[(pentafluoroethyl)sulfonyl-kO]ethanesulfonamido-kO]-, (OC-6-11)- (9CI) (CA INDEX NAME)



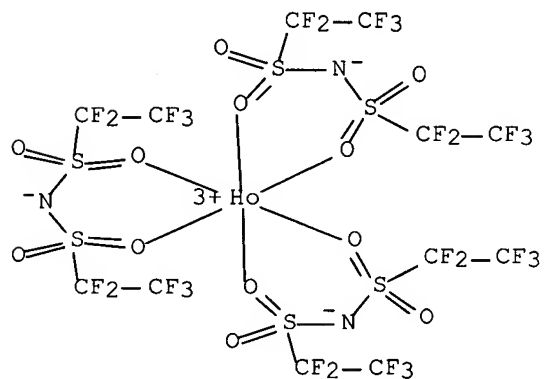
RN 259194-40-6 HCAPLUS

CN Europium, tris[1,1,2,2,2-pentafluoro-N-[(pentafluoroethyl)sulfonyl-kappa O]ethanesulfonamidato-kappa O]-, (OC-6-11)- (9CI) (CA INDEX NAME)

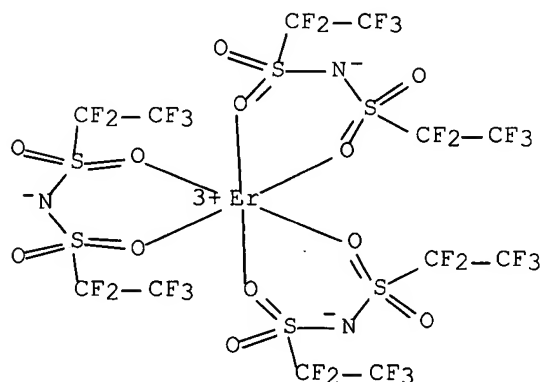


RN 634598-36-0 HCAPLUS

CN Holmium, tris[1,1,2,2,2-pentafluoro-N-[(pentafluoroethyl)sulfonyl-kappa O]ethanesulfonamidato-kappa O]-, (OC-6-11)- (9CI) (CA INDEX NAME)



RN 634598-37-1 HCAPLUS
 CN Erbium, tris[1,1,2,2,2-pentafluoro-N-[(pentafluoroethyl)sulfonyl-
 κO]ethanesulfonamido-κO]-, (OC-6-11)- (9CI) (CA INDEX
 NAME)



IC ICM H01M010-40
 ICS H01M004-02; H01M004-58
 CC 52-2 (Electrochemical, Radiational, and Thermal Energy Technology)
 IT 872-36-6, Vinylene carbonate 4378-87-4 76076-58-9 82727-20-6
 259194-36-0 259194-40-6 634598-36-0
 634598-37-1 648922-25-2 648922-26-3 648922-27-4
 RL: MOA (Modifier or additive use); USES (Uses)
 (electrolyte solns. containing sulfonic acid anhydrides for
 secondary batteries)

L21 ANSWER 11 OF 16 HCAPLUS COPYRIGHT 2007 ACS on STN
 ACCESSION NUMBER: 2004:3207 HCAPLUS Full-text
 DOCUMENT NUMBER: 140:84364
 TITLE: Electrolytes for electrooptic devices comprising
 ionic liquids
 INVENTOR(S): Warner, Benjamin P.; McCleskey, T. Mark;
 Agrawal, Anoop; Cronin, John P.; Tonazzi, Juan
 C. L.; Burrell, Anthony K.
 PATENT ASSIGNEE(S): The Regents of the University of California, USA
 SOURCE: PCT Int. Appl., 105 pp.
 CODEN: PIXXD2
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 2
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004001877	A2	20031231	WO 2003-US19677	20030620

WO 2004001877 A3 20050203

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH,
 CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD,
 GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ,
 LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ,
 NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ,

TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW
 RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ,
 BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK,
 EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE,
 SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR,
 NE, SN, TD, TG

AU 2003256281	A1	20040106	AU 2003-256281	200306 20
BR 2003005630	A	20041130	BR 2003-5630	200306 20
EP 1529240	A2	20050511	EP 2003-761234	200306 20
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
CN 1672094	A	20050921	CN 2003-817384	200306 20
JP 2005530894	T	20051013	JP 2004-516104	200306 20
PRIORITY APPLN. INFO.:			US 2002-390611P	P 200206 21
			WO 2003-US19677	W 200306 20

OTHER SOURCE(S): MARPAT 140:84364

AB Electrolyte solns. are described which have glass transition temps. of .ltorsim.-40° and which comprise ≥1 bifunctional redox dyes dissolved in an an ionic liquid solvent (e.g., a molten salt solvent). The solvents preferably include lithium or quaternary ammonium cations, and perfluorinated sulfonylimide anions selected from trifluoromethylsulfonate, bis(trifluoromethylsulfonyl)imide, bis(perfluoroethylsulfonyl)imide, and tris(trifluoromethylsulfonyl)methide. Electrooptical devices (e.g., electrochromic windows and electrochromic mirrors) employing the electrolytes, and bifunctional redox dyes appropriate for use in the electrolytes, are also described. A method of introducing the electrolytes into electrooptical devices entailing vacuum backfilling after warming it to ≥40° is also described. The electrooptic devices exhibit enhanced stability toward UV radiation relative to conventional devices.

IT 641609-34-9P

RL: DEV (Device component use); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)

(electrolytes for electrooptical devices comprising ionic liqs. as solvents for redox dyes and the devices and dyes)

RN 641609-34-9 HCAPLUS

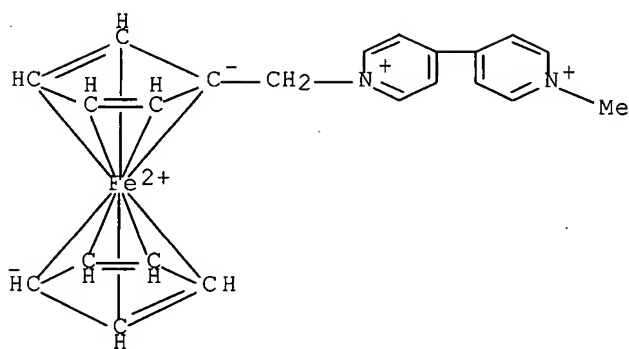
CN 4,4'-Bipyridinium, 1-(ferrocenylmethyl)-1'-methyl-, salt with 1,1,1-trifluoro-N-[(trifluoromethyl)sulfonyl]methanesulfonamide (1:2) (9CI) (CA INDEX NAME)

CM 1

CRN 258352-83-9

CMF C22 H22 Fe N2

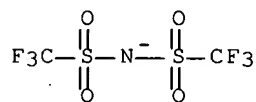
CCI CCS



CM 2

CRN 98837-98-0

CMF C2 F6 N O4 S2



IC ICM H01M

CC 73-11 (Optical, Electron, and Mass Spectroscopy and Other Related Properties)

Section cross-reference(s): 41, 72, 74

IT 641609-34-9P

RL: DEV (Device component use); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)

(electrolytes for electrooptical devices comprising ionic liqs. as solvents for redox dyes and the devices and dyes)

L21 ANSWER 12 OF 16 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2003:991842 HCAPLUS Full-text

DOCUMENT NUMBER: 140:29537

TITLE: Electrolyte solution for secondary lithium battery and the battery using the solution

INVENTOR(S): Utsugi, Koji; Mori, Mitsuhiro

PATENT ASSIGNEE(S): NEC Corporation, Japan

SOURCE: PCT Int. Appl., 31 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003105268	A1	20031218	WO 2003-JP7418	200306

11

W: CA, CN, KR

RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU,
IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR

JP 2004014459 A 20040115 JP 2002-170228

200206

11

CN 1613165 A 20050504 CN 2003-802029

200306

11

US 2005100795 A1 20050512 US 2003-726013

200312

03

PRIORITY APPLN. INFO.:

JP 2002-170228

A

200206

11

WO 2003-JP7418

W

200306

11

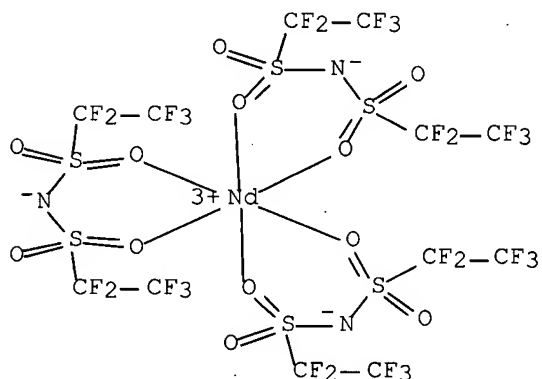
AB The electrolyte solution comprises at least **imide anions**, **transition metal** ions and a compound having a **sulfonyl** group, in an aprotic solvent. The battery using the electrolyte solution has long cycle life and high safety.

IT 259194-36-0 259194-40-6 634598-36-0
634598-37-1

RL: DEV (Device component use); USES (Uses)
(**electrolyte** solns. containing **sulfonyl** compds.,
transition metal ions and **imide**
anions for secondary lithium batteries)

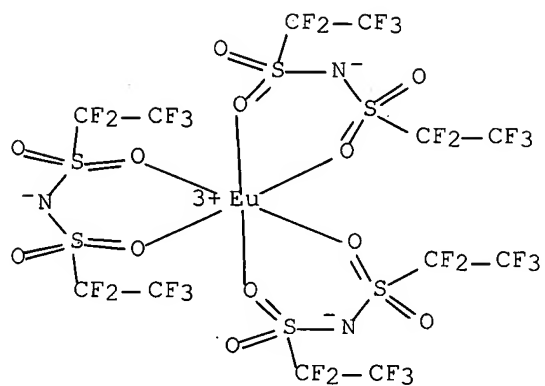
RN 259194-36-0 HCAPLUS

CN Neodymium, tris[1,1,2,2,2-pentafluoro-N-[(pentafluoroethyl)sulfonyl-
κO]ethanesulfonamidato-κO]-, (OC-6-11)-(9CI) (CA INDEX
NAME)



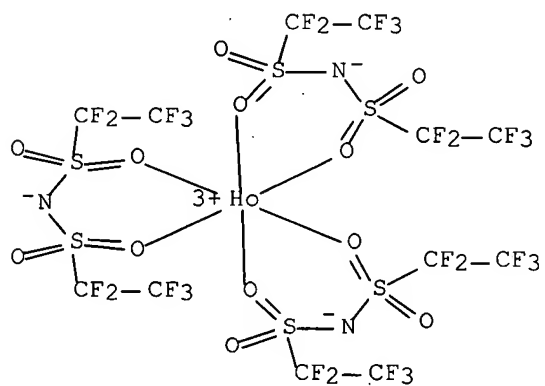
RN 259194-40-6 HCAPLUS

CN Europium, tris[1,1,2,2,2-pentafluoro-N-[(pentafluoroethyl)sulfonyl-
κO]ethanesulfonamidato-κO]-, (OC-6-11)-(9CI) (CA INDEX
NAME)



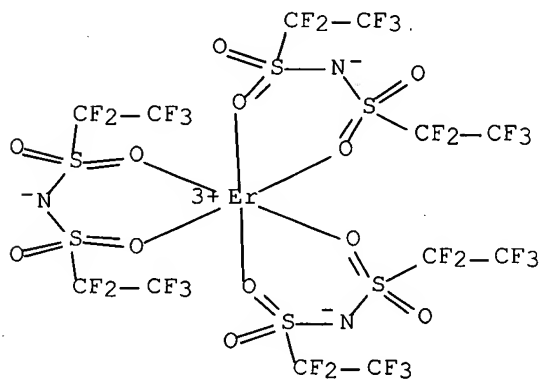
RN 634598-36-0 HCAPLUS

CN Holmium, tris[1,1,2,2,2-pentafluoro-N-[(pentafluoroethyl)sulfonyl- κ O]ethanesulfonamidato- κ O]-, (OC-6-11)-(9CI) (CA INDEX NAME)



RN 634598-37-1 HCAPLUS

CN Erbium, tris[1,1,2,2,2-pentafluoro-N-[(pentafluoroethyl)sulfonyl- κ O]ethanesulfonamidato- κ O]-, (OC-6-11)-(9CI) (CA INDEX NAME)



IC ICM H01M010-40
ICS H01M004-02

CC 52-2 (Electrochemical, Radiational, and Thermal Energy Technology)

ST secondary lithium battery electrolyte aprotic solvent; battery electrolyte imide **transition metal sulfonyl** compd

IT Battery electrolytes
(electrolyte solns. containing **sulfonyl** compds., **transition metal** ions and **imide anions** for secondary lithium batteries)

IT Secondary batteries
(lithium; electrolyte solns. containing **sulfonyl** compds., **transition metal** ions and **imide anions** for secondary lithium batteries)

IT 7440-44-0, Carbon, uses
RL: DEV (Device component use); USES (Uses)
(amorphous; anode; electrolyte solns. containing **sulfonyl** compds., **transition metal** ions and **imide anions** for secondary lithium batteries)

IT 7439-93-2, Lithium, uses 7782-42-5, Graphite, uses 68848-64-6
RL: DEV (Device component use); USES (Uses)
(anode; electrolyte solns. containing **sulfonyl** compds., **transition metal** ions and **imide anions** for secondary lithium batteries)

IT 12057-17-9, Lithium manganese oxide (LiMn2O4)
RL: DEV (Device component use); USES (Uses)
(cathode; electrolyte solns. containing **sulfonyl** compds., **transition metal** ions and **imide anions** for secondary lithium batteries)

IT 96-49-1, Ethylene carbonate 105-58-8, Diethyl carbonate
108-32-7, Propylene carbonate 872-36-6, Vinylene carbonate
1120-71-4, 1,3-Propane sultone 132843-44-8 **259194-36-0**
259194-40-6 634598-36-0 634598-37-1
RL: DEV (Device component use); USES (Uses)
(electrolyte solns. containing **sulfonyl** compds., **transition metal** ions and **imide anions** for secondary lithium batteries)

REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L21 ANSWER 13 OF 16 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2003:586714 HCAPLUS Full-text

DOCUMENT NUMBER: 139:136062

TITLE: Manufacture of electrolytic solution containing complex made up of transition metal and imido anion for secondary battery, manufacture of secondary battery, and secondary battery with improved cycle characteristics

INVENTOR(S): Mori, Mitsuhiro; Naoi, Katsuhiko; Niino, Tatsuo; Utsuki, Koji; Hasegawa, Etsuo

PATENT ASSIGNEE(S): NEC Corp., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 10 pp.
CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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JP 2003217662

A

20030731

JP 2002-107472

200204

10

PRIORITY APPLN. INFO.:

JP 2001-349839

A

200111

15

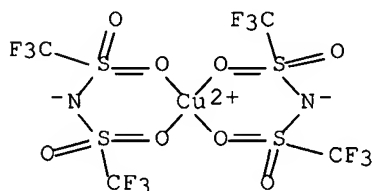
AB The process comprises the steps of (1) dissolving a complex made up of a ~~transition metal~~ and an imido anion in a solvent and (2) dissolving Li salt. The imido anion may be $N(CnF2+n+1SO2)_2$ or $N(CnF2+n+1SO2)(CmF2m+1SO2)$ ($n, m =$ natural number). The Li salt may be $LiPF_6$, $LiBF_4$, $LiAsF_6$, $LiSbF_6$, $LiClO_4$, and/or $LiAlCl_4$. The transition metal may be a lanthanoid metal such as Eu, Ny, Er, and/or Ho.

IT 162715-14-2 207861-67-4 460092-04-0
569362-43-2

RL: TEM (Technical or engineered material use); USES (Uses)
(**electrolytic** solution containing complex made up of
transition metal and imido anion for Li secondary battery with
improved cycle characteristics)

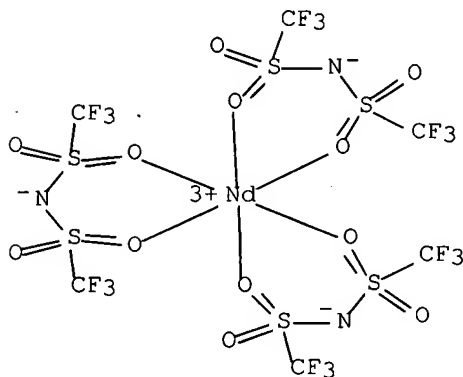
RN 162715-14-2 HCAPLUS

CN Copper, bis[1,1,1-trifluoro-N-[(trifluoromethyl)sulfonyl-
κO]methanesulfonamidato-κO]- (CA INDEX NAME)



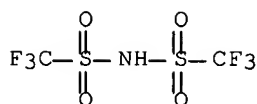
RN 207861-67-4 HCAPLUS

CN Neodymium, tris[1,1,1-trifluoro-N-[(trifluoromethyl)sulfonyl-
κO]methanesulfonamidato-κO]-, (OC-6-11)- (9CI) (CA
INDEX NAME)



RN 460092-04-0 HCAPLUS

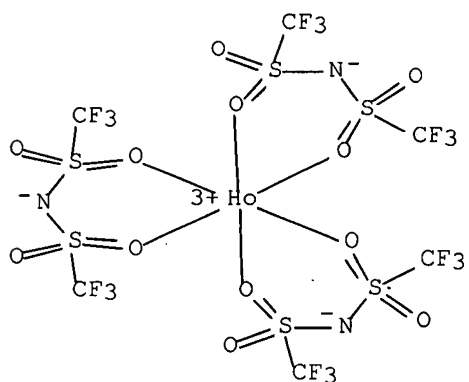
CN Methanesulfonamide, 1,1,1-trifluoro-N-[(trifluoromethyl)sulfonyl]-,
chromium(3+) salt (9CI) (CA INDEX NAME)



● 1/3 Cr(III)

RN 569362-43-2 HCAPLUS

CN Holmium, tris[1,1,1-trifluoro-N-[(trifluoromethyl)sulfonyl-
κO]methanesulfonamidato-κO]-, (OC-6-11)- (9CI) (CA
INDEX NAME)



IC ICM H01M010-40

ICS H01M004-02

CC 52-2 (Electrochemical, Radiational, and Thermal Energy Technology)

IT 7440-00-8, Neodymium, uses 7440-52-0, Erbium, uses 7440-53-1,
Europium, uses 7440-60-0, Holmium, uses 162715-14-2
207861-67-4 460092-04-0 569362-43-2

RL: TEM (Technical or engineered material use); USES (Uses)
(electrolytic solution containing complex made up of
transition metal and imido anion for Li secondary battery with
improved cycle characteristics)

L21 ANSWER 14 OF 16 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2003:22564 HCAPLUS Full-text

DOCUMENT NUMBER: 138:92818

TITLE: Battery and its manufacture

INVENTOR(S): Takagi, Ryosuke

PATENT ASSIGNEE(S): Sony Corp., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 12 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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JP 2003007335

A

20030110

JP 2001-188149

200106
21

PRIORITY APPLN. INFO.:

JP 2001-188149

200106
21

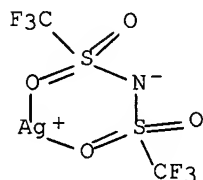
AB The battery contains Ag at $\leq 10,000$ ppm of the electrolyte solvent mass, and is prepared by dissolving a Ag salt, having counter anion selected from CF_3SO_3^- , $(\text{CF}_3\text{SO}_2)_2\text{N}^-$, $(\text{CF}_2\text{SO}_2)_3\text{C}^-$, BF_4^- , and PF_6^- , in the solvent.

IT 189114-61-2

RL: DEV (Device component use); USES (Uses)
(electrolyte solns. with controlled silver fluoro salt content for secondary lithium batteries)

RN 189114-61-2 HCAPLUS

CN Silver, [1,1,1-trifluoro-N-[(trifluoromethyl)sulfonyl-
kO]methanesulfonamidato-kO]- (9CI) (CA INDEX NAME)



IC ICM H01M010-40

ICS H01M004-02

CC 52-2 (Electrochemical, Radiational, and Thermal Energy Technology)

IT 96-49-1, Ethylene carbonate 108-32-7, Propylene carbonate
2923-28-6, Silver trifluoromethanesulfonate. 7761-88-8, Silver
nitrate, uses 14283-07-9, Lithium fluoroborate 21324-40-3,
Lithium hexafluorophosphate 33454-82-9, Lithium
trifluoromethanesulfonate 90076-65-6 114395-71-0 132404-42-3
189114-61-2

RL: DEV (Device component use); USES (Uses)
(electrolyte solns. with controlled silver fluoro salt
content for secondary lithium batteries)

L21 ANSWER 15 OF 16 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2002:757315 HCAPLUS Full-text

DOCUMENT NUMBER: 137:239065

TITLE: Electrochemical preparation method for metallic
salts

INVENTOR(S): Dunach, Clinet Isabel; Favier, Isabelle;
Hebrault, Dominique; Desmurs, Jean Roger

PATENT ASSIGNEE(S): Rhodia Chimie, Fr.; Rhodia Poulenc Chimie

SOURCE: Fr. Demande, 20 pp.

CODEN: FRXXBL

DOCUMENT TYPE: Patent

LANGUAGE: French

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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FR 2818994

A1

20020705

FR 2000-17316

200012

29

FR 2818994

B1

20040109

FR 2000-17316

200012

29

PRIORITY APPLN. INFO.:

AB The invention concerns electrochem. preparation method for metallic salts of formulas: $[(RfSO_2(O)a)c(N)b]n-Xn+$ where Rf is organic radical C_mH_{2m+1} with $m=1-7$, a and b are different one from another, varying from 0 to 1, and when $a=1$, $c=1$ and when $a=0$, $c=2$; n changes from 1 to 6, and X is metallic element by electrolysis of solution of substrate of formulas: $[(RfSO_2(O)a)c(N)b]H$. The process is carried out in the one compartment electrolytic cell with sacrificial anode from metal "X" of salt prepared, using polar organic solvent with dielec. constant ≥ 8 .

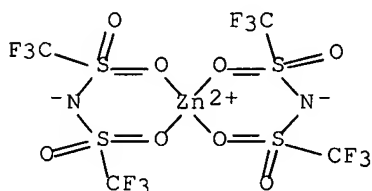
IT 168106-25-0P, Methanesulfonamide, 1,1,1-trifluoro-N-[(trifluoromethyl)sulfonyl]-, zinc salt 207861-63-0P

RL: CPS (Chemical process); PEP (Physical, engineering or chemical process); PNU (Preparation, unclassified); PREP (Preparation); PROC (Process)

(electrochem. preparation by **electrolysis** of trifluoro-N-[(trifluoromethyl)sulfonyl] with sacrificial anode)

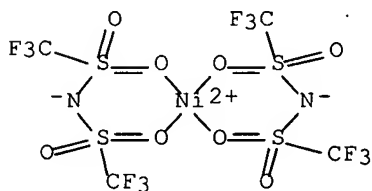
RN 168106-25-0 HCAPLUS

CN Zinc, bis[1,1,1-trifluoro-N-[(trifluoromethyl)sulfonyl- κO]methanesulfonamidato- κO]-, (T-4)- (9CI) (CA INDEX NAME)



RN 207861-63-0 HCAPLUS

CN Nickel, bis[1,1,1-trifluoro-N-[(trifluoromethyl)sulfonyl- κO]methanesulfonamidato- κO]- (CA INDEX NAME)



IC ICM C25B003-12

ICS C25B011-04; C07C309-06; C07C311-48

ICA B01J031-12

ICI B01J031-12, B01J103-40, B01J103-12, B01J103-64, B01J103-46

CC 72-9 (Electrochemistry)

Section cross-reference(s): 29

IT 133395-16-1P 168106-25-0P, Methanesulfonamide, 1,1,1-trifluoro-N-[(trifluoromethyl)sulfonyl]-, zinc salt

175438-45-6P, Methanesulfonamide, 1,1,1-trifluoro-N-
[(trifluoromethyl)sulfonyl]-, aluminum salt 207861-63-0P
391611-05-5P

RL: CPS (Chemical process); PEP (Physical, engineering or chemical
process); PNU (Preparation, unclassified); PREP (Preparation); PROC
(Process)

(electrochem. preparation by **electrolysis** of
trifluoro-N-[(trifluoromethyl)sulfonyl with sacrificial anode)

L21 ANSWER 16 OF 16 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2002:560659 HCAPLUS Full-text

DOCUMENT NUMBER: 137:391850

TITLE: Poly(3,4-alkylenedioxythiophene)-Based
Supercapacitors Using Ionic Liquids as
Supporting Electrolytes

AUTHOR(S): Stenger-Smith, John D.; Webber, Cynthia K.;
Anderson, Nicole; Chafin, Andrew P.; Zong,
Kyukwan; Reynolds, John R.

CORPORATE SOURCE: Research Department, Chemistry Division, Naval
Air Warfare Center/Weapons Division, China Lake,
CA, 93555, USA

SOURCE: Journal of the Electrochemical Society (2002),
149(8), A973-A977

CODEN: JESOAN; ISSN: 0013-4651

PUBLISHER: Electrochemical Society

DOCUMENT TYPE: Journal

LANGUAGE: English

AB A series of dual conducting polymer based type I supercapacitors were constructed using poly(3,4-propylenedioxythiophene) and poly(3,4-ethylenedioxythiophene) as electrode couples. The switching speeds and cycle lifetimes of these supercapacitors were compared using two types of supporting electrolytes; lithium bis(trifluoromethanesulfonyl)imide and 1-ethyl-3-methyl-1-H-imidazolium bis(trifluoromethanesulfonyl)imide (a room temperature molten salt). The results indicate that supercapacitors using 1-ethyl-3-methyl-1-H-imidazolium bis(trifluoromethanesulfonyl)imide as the supporting electrolyte have cycle lifetimes superior to supercapacitors using lithium bis(trifluoromethanesulfonyl)imide as the supporting electrolyte.

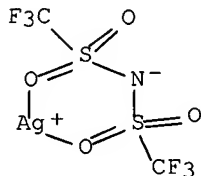
IT 189114-61-2P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation);
RACT (Reactant or reagent)

(polyalkylenedioxythiophene-based supercapacitors using ionic
liqs. as supporting **electrolytes**)

RN 189114-61-2 HCAPLUS

CN Silver, [1,1,1-trifluoro-N-[(trifluoromethyl)sulfonyl-
kO]methanesulfonamidato-kO]- (9CI) (CA INDEX NAME)



CC 76-10 (Electric Phenomena)
Section cross-reference(s): 38

IT 189114-61-2P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation);
RACT (Reactant or reagent)

(polyalkylenedioxythiophene-based supercapacitors using ionic
liqs. as supporting electrolytes)

REFERENCE COUNT: 22 THERE ARE 22 CITED REFERENCES AVAILABLE
FOR THIS RECORD. ALL CITATIONS AVAILABLE
IN THE RE FORMAT

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